### AM-FM STEREO RECEIVER R-A4070/A5070 [E, T, G Type]

## SERVICE MANUAL

(E63-O157-08)

## KENWOOI



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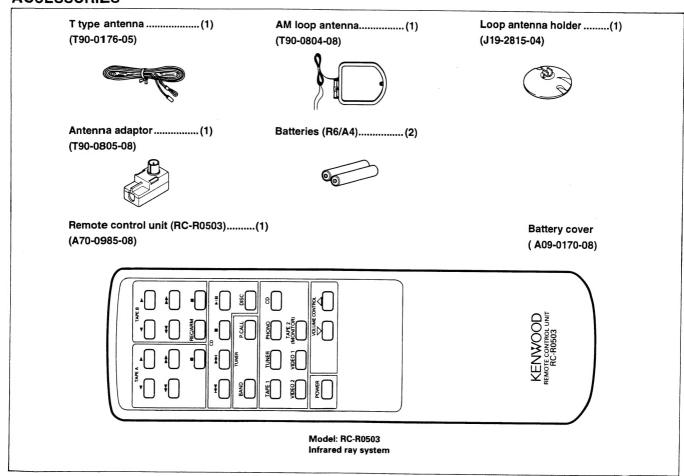
#### PHOTO is KR-A4070 (T type) Knob (INPUT SELECTOR) Knob (PRESET 10KEY) (K29-6182-08) (K29-6180-08) Knob (VOLUME CONTROL) Metallic cabinet Knob (P, CALL) Knob (POWER) Badge (LOGO) Front grass (K29-6186-08) (K29-6181-08) (B43-0287-04) (B10-2137-08) (A01-3167-08) (K29-6184-08) 100 KENWOOD Knob (BASS, TREBLE, BALANCE) Knob (FUNCTION) Front panel \* Knob (SPEAKERS) Phone jack (K29-6183-08) (K29-6189-08) (A60-)(K29-6187-08) (E11-0263-08) AC cord bushing AC outlet \* AC power cord Terminal board (ANTENNA) (E03-) (E30-) (J42-0200-08) (E70-0023-08) 0 CE 0 Lock terminal board (SPEAKERS) Foot Phono jack (CD, TAPE1) (J02-1099-08) (E70-0004-08) (E63-0159-08) Miniatua phonejack (SYNCHR0) Slide switch (IMPEDANCE SELECTOR) Phono jack (TAPE2, VIDEO1, 2) Phono jack (PHONO) (E11-0188-05) (E63-0158-08) (S62-0032-08)

<sup>\*</sup> Refer to parts list on page 26.

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#### **ACCESSORIES**

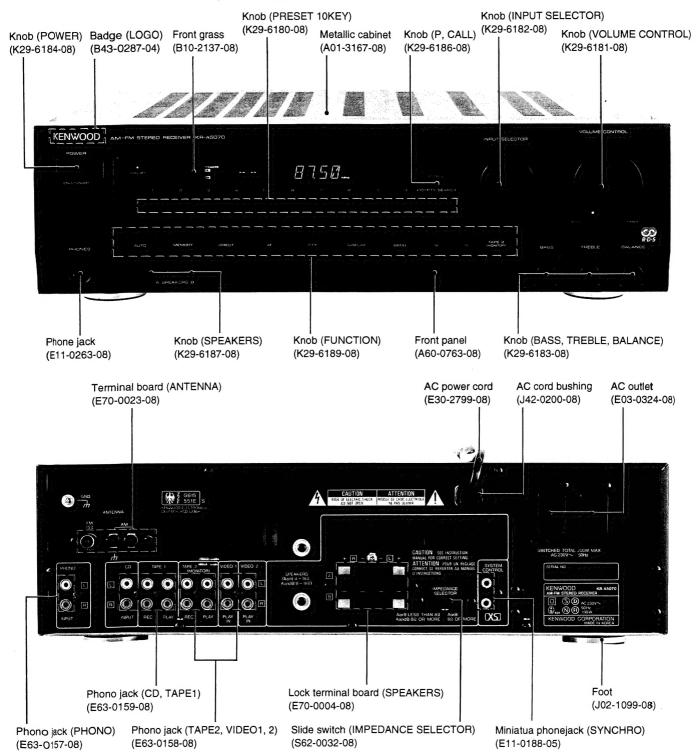


#### **INSTRUCTION MANUAL**

	Parts No.	Destination
ENGLISH	B60-2114-08	T, E
FRE/DUC/ITA/SPA	B60-2115-08	E
GERMANY	B60-2116-08	E, G

### **EXTERNAL VIEW: KR-A5070**

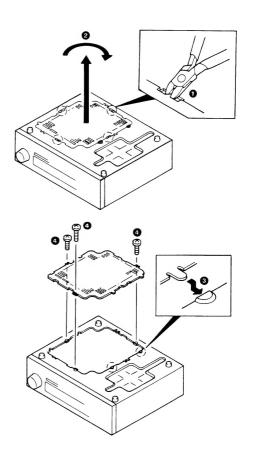
### PHOTO is KR-A5070 (E, G type)

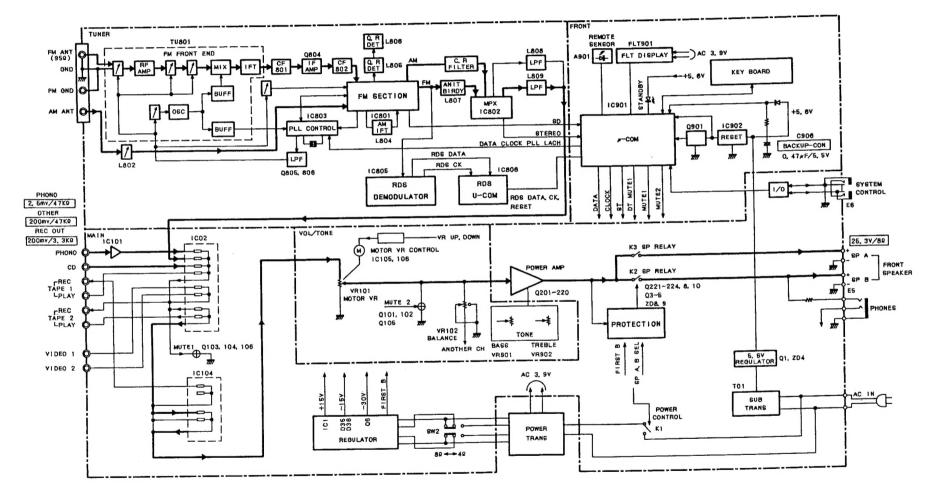


## **DISASSEMBLY FOR REPAIR** [Illustrations are reference materials.]

1. Repair can be carried out with the Main (AUDIO) PCB and the power supply PCB mounted on the rear panel when the 17 screws (1) are removed.

- 2. Cut the 4 places with a pair of nippers (1), and remove the bottom panel from chassis.
- 3. Move the unit holder from the current position to the open mounting position.
- 4. Rotate the lid, which was cut off, by 180° degrees
- 5. Insert the lids in the 2 places of the chassis (3), and mount them with the 3 screws (4).





### **CIRCUIT DESCRIPTION**

#### 1. Function description **Features**

### 1-1. AMP

- Seven position selector: CD, TUNER, PHONO, TAPE1, TAPE2, VIDEO1, VIDEO2
- Six audio output terminals : CD, PHONO, TAPE1, TAPE2, VIDEO1, VIDEO2
- Tree output terminals : TAPE1, TAPE2
- LINE STRAIGHT

- Speaker A/B change-over
- TAPE2 monitor

#### **1-2. TUNER**

- 20ch random preset
- Tuning control by IF count
- Direct selection
- RDS function (E, T type only)

### 2. Conditions according to the destination and model

#### 2-1. AMP

MODEL	DIOD	E SW	Commenced formation	
MODEL	5 4		PRO-LOGIC, 3-STEREO, DSP, DSP-LOGIC PRO-LOGIC, 3-STEREO No surround	
KR-V7050	0	0	PRO-LOGIC, 3-STEREO, DSP, DSP-LOGIC	
KR-V6050 (Except E, T only)	0	1	PRO-LOGIC, 3-STEREO	
KR-A4060/A5060 (E, T only)	1	Х	No surround	
KR-A4070/A5070 (E, T only)	1	X	No surround	

X : Don't care

#### **2-2. TUNER**

Doublesties		DIODE SW		DIODE SW		Band	and Receiving Remarks Channel space		1F		
Destination	3	2	1	0	Danu	neceiving nemarks	Channel space	IF.	RF	Note	
K1	0	^	0	0	FM	87.5MHz~108.0MHz	100kHz	+10.7MHz	50kHz		
N1	0	Ů	"	<u> </u>	AM	530kHz~1610kHz	10kHz	+450kHz	10kHz		
K2	0	0	1	0	FM	87.5MHz~108.0MHz	100kHz	+10.7MHz	50kHz		
NZ	١٠	١	<u>'</u>	U	AM	530kHz~1700kHz	10kHz	+450kHz	10kHz		
E	0	1	0	0	FM	87.5MHz~108.0MHz	50kHz	+10.7MHz	50kHz		
_	0	'	0	U	AM	531kHz~1602kHz	9kHz	+450kHz	9kHz		
E	1	1	0	0	FΜ	87.5MHz~108.0MHz	50kHz	+10.7MHz	50kHz	M/H DDC	
<b>C</b>	,	,	0	0	AM	531kHz~1602kHz	9kHz	+450kHz	9kHz	With RDS	

#### 2-3. Diode matrix: Diode switch No.

	Pin No.	55	56	57	58	59	60
Pin No.	Pin name	KR5	KR4	KR3	KR2	KR1	KR0
61	KS7	Channel space	AM 1610/1700	RDS Yes/No	DSP.DOL/DOL only	Surround Yes/No	()≺)
Diode swit	tch No.	2	1	3	4	5	0
Diode Ref.	No.	D911	-	D910	-	D909	_

- Diode SW 0→
- Diode SW 1→ AM band range/Except E, T type only

0: AM NARROW

1: AM WIDE

Diode SW 2→ Channel base

(Products bound for M: Change-over

with switch)

0 : FM 100kHz/step, AM 10kHz/step

- 1 : FM 50kHz/step, AM 9kHz/step
- Diode SW 3→With/Without RDS/E, T type only

0: Without RDS

1: With RDS

Diode SW 4→Surround mode

0: Dolby function & DSP function

1: Dolby function only

Diode SW 5→With/Without surround

0: With surround

1: Without surround

### **CIRCUIT DESCRIPTION**

#### 3. Initial state

① POWER OFF	
② AMP system	,
Audio selector	TUNER
Video system selector	orVIDEO 1
• Speaker A	ON
Speaker B	OFF
• TAPE 2 monitor	OFF
• LINE STARIGHT	OFF

3 TUNER system	
• Band	FM
<ul> <li>Frequency</li> </ul>	Lower limit of FM (87.5MHz)
<ul> <li>TUNING mode</li> </ul>	AUTO TUNING (AUTO STEREO)
<ul> <li>P.CH indication</li> </ul>	
Test frequency	

	K1 type	K2 type	E type
01ch	FM 98.00MHz	FM 98.00MHz	FM 98.00MHz
	FM108.00MHz	FM108.00MHz	FM108.00MHz
02ch	AM 630 kHz	AM 630 kHz	AM 630 kHz
03ch	AM 990 kHz	AM 990 kHz	AM 990 kHz
04ch	AM 1440 kHz	AM 1440 kHz	AM 1440 kHz
05ch	AM 1610 kHz	AM 1700 kHz	AM 1602 kHz
06ch	FM 87.50MHz	FM 87.50MHz	FM 87.50MHz
07ch	FM 98.50MHz	FM 98.50MHz	FM 98.50MHz
08ch		AM 530 kHz	AM 531 kHz
09ch	AM 530 kHz FM 89.10MHz	FM 89.10MHz	FM 89.10MHz
10ch	FM 87.50MHz	FM 87.50MHz	FM 87.50MHz
11ch	FM 87.50MHz	FM 87.50MHz	FM 87.50MHz
12ch	FM 87.50MHz	FM 87.50MHz	FM 87.50MHz
13ch	FM 87.50MHz	FM 87.50MHz	FM 87.50MHz
14ch	FM 87.50MHz	FM 87.50MHz	FM 87.50MHz
15ch	FM 87.50MHz	FM 87.50MHz	FM 87.50MHz
16ch	FM 87.50MHz	FM 87.50MHz	FM 87.50MHz
17ch	FM 87.50MHz	FM 87.50MHz	FM 87.50MHz
18ch	FM 87.50MHz	FM 87.50MHz	FM 87.50MHz
19ch	FM 87.50MHz	FM 87.50MHz	FM 87.50MHz

Initial setting Insert the AC power cord plug in the electrical outlet while pushing the "POWER" key.

### **CIRCUIT DESCRIPTION**

#### 4. Main Unit Test Mode

#### Setting method

Turn the AC power ON while pushing the "TUNING DOWN" key.

#### Cancellation method

Turn the AC power OFF.

#### **Contents**

① Start of the main unit test mode The operation gets in the test mode through a main unit key, when the AC power is turned ON while pushing the "TUNING DOWN" key.

#### Three operations are carried out in this case.

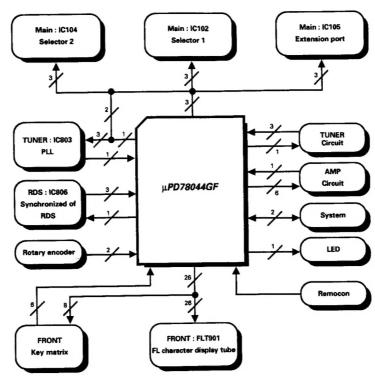
- Automatic power ON
- All fluorescent character display tubes and LED light up.
- Initialization of all states except POWER ON/OFF.
   The "All indications lit up" states is cancelled by pushing any key of the main unit.
   The states changed during the test mode are initialized when the main unit test mode is cancelled (AC power OFF).
- ② Automatic motor VR UP/DOWN (AMP) The operation (16 sec. UP→16 sec. DOWN→STOP) of the motor is carried out when the "TAPE 2" key is operated. Therefore, "TAPE 2 (MONITOR)" can not be changed-over during the main unit test mode.

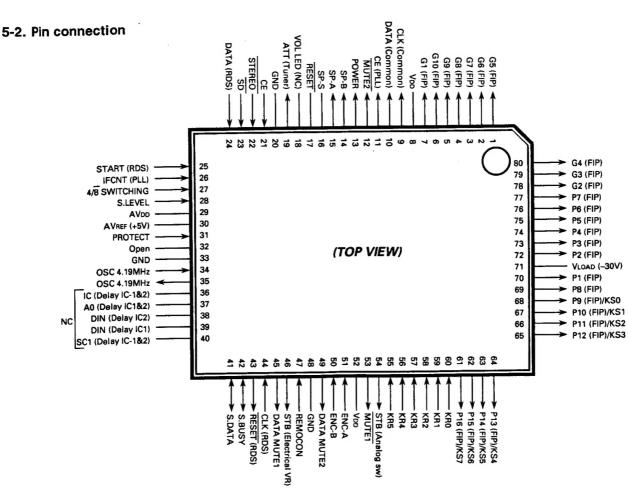
- ③ Mute signal output (AMP) No control of selector MUTE (MUTE1) is carried out.
- ④ Test mode operation of 0~9, +10 (TUNER)
- a) When the +10 key is not operated, the channels 1~9 (keys 1~9), as well as the channel 10 (key 0), can be called.
- b) When the +10 key is operated once, the channels 11~19 (keys 1~9), as well as the channel 20 (key 0), can be called.
- c) When the +10 key is operated once again, the operation returns to the case "a) When the +10 key is not operated".
- ⑤ Processing of keys available only in the remote controller
- Processing related to the AMP: None
- Processing related to the TUNER: None
- © Cancellation of the main unit test mode The test mode is cancelled, and the operation returns to the initial state when the AC power is turned OFF during the test mode.

### **CIRCUIT DESCRIPTION**

5. μ-com : μPD78044GF-021 (Front PCB : IC901)

5-1. µ-com periphery block diagram





### **CIRCUIT DESCRIPTION**

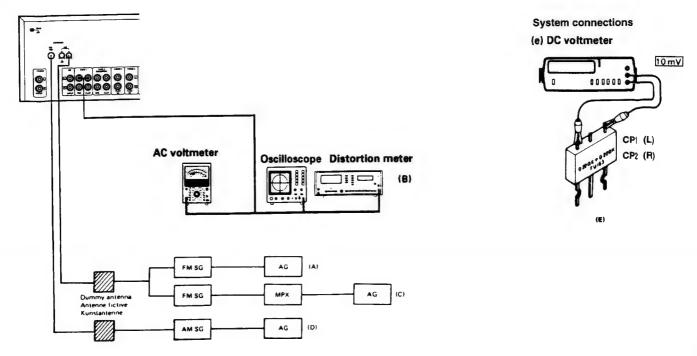
#### 5-3. Pin function

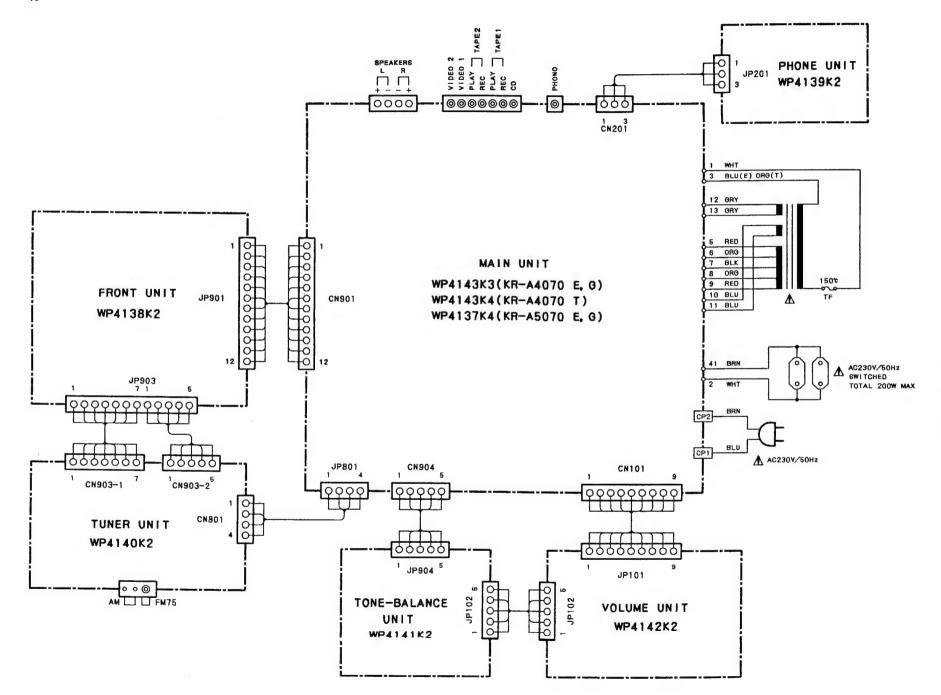
No.	Name	1/0	Function
1~6, 7	G5~G10, G1	0	FL grid 5~10, and 1.
8	VDD	-	Power supply.
9	CLK (Common)	0	Clock for control IC. (Analog sw/PLL IC/Electronic VOL)
10	DATA (Common)	0	Data for control IC. (Analog sw/PLL IC/Electronic VOL)
11	CE (PLL)	0	PLL CE.
12	MUTE2	0	Amplifier mute control. ("H" : Mute OFF, "L" : Mute ON)
13	POWER	0	Power relay control. ("H" : Power ON, "L" : Power OFF)
14	SP-B	10	Speaker B relay control. ("H" : SP-B ON, "L" : SP-B OFF)
15	SP-A	10	Speaker A relay control. ("H" : SP-A ON, "L" : SP-A OFF)
16	SP-S	-	Not used (open).
17	RESET	+	μ-com reset.
18	VOL LED	+-	Not used (open).
19	ATT (Tuner)	0	Attenuator control ("H" : ATT ON, "L" : ATT OFF)
20	GND	+-	A/D power supply.
21	CE	1	μ-com CE.
22	STEREO	++	Stereo signal detection. ("H" : Monaural, "L" : Stereo)
23	SD	<del>li</del>	Tuning signal detection. ("H": Not tuned, "L": Tuned)
24	DATA (RDS)	Ti-	RDS data.
25	START (RDS)	1 :	RDS start bit.
26	IFCNT (PLL)	$\pm \pm$	IF CNT data (PLL DO).
27	4/8 SWITCHING	<del>+ i -</del>	Speaker impedance switching. ("H" : $4\Omega$ , "L" : $8\Omega$ )
28	S.LEVEL	1	Signal level (A/D).
29	AVDD	† <u>-</u>	A/D power supply.
30	AVREF	-	A/D reference voltage (+5V).
31	PROTECT	+=	Protection detection. ("H" : Protection, "L" : Normal)
32	NC	+	Open.
33	Vss	+-	GND
34	X1	1	4.19MHz oscillator.
35	X2	0	4.19MHz oscillator.
36	I C (DELAY IC-1 & 2)	-	Not used.
37	A0 (DELAY IC-1 & 2)	<del>  -</del>	Not used.
38	DIN (DELAY IC-1)	+-	Not used.
39	DIN (DELAY IC-1)	-	Not used.
40	SC1 (DELAY IC-1 & 2)	+	Not used.
41	S.DATA	1/0	8-bit system data.
42	S. BUSY	1/0	8-bit system busy.
	RESET (RDS)	0	RDS reset.
43	CLK (RDS)	1	RDS clock.
45	DT MUTE1	0	Data mute 1. ("H" : ON, "L" : OFF)
46	STB (Electical VOL)	-	Not used.
47	REMOCON	+-	Remote controller input.
48	GND	<u> </u>	
49	DT MUTE2	-	Not used.
50, 51	ENC-B, ENC-A		Encoder input. (50 pin : Encoder B, 51 pin : Encoder A)
52	VDD	+-	Power supply.
53	MUTE1	0	Selector MUTE control. ("H" : MUTE OFF, "L" : MUTE ON)
54	STB (Analog sw)	0	Analog sw STB.
55~60	KR5~KR0	1	Key return 5~0. (Pin 56: Not used)
61~68	P16/KS7~P9/KS0	0	FL segment 16~9 / Key scan 7~0.
69, 70	P8, P1	0	FL segment 16~9 / Rey Scall /~0. FL segment (69 pin : Segment 8, 70 pin : Segment 1)
71	-30V (VLOAD)		FL drive power supply.
		-	
72~77	P2~P7	0	FL segment 2~7.
78~80	G2~G4	0	FL grid 2~4.

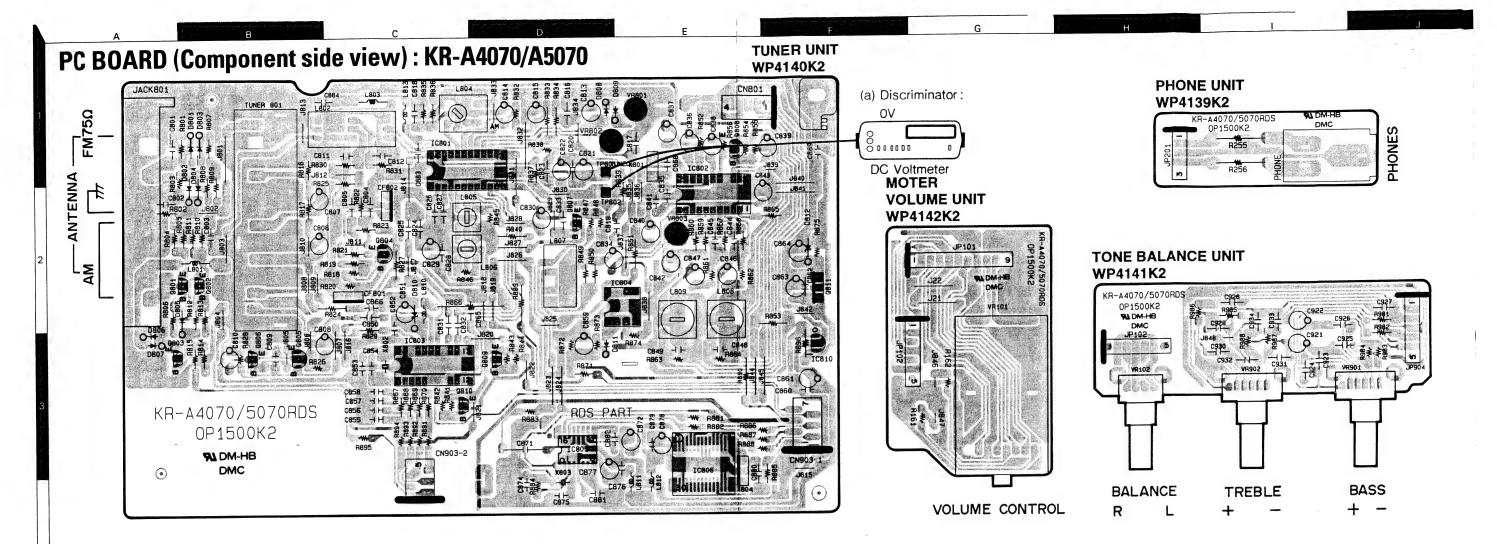
### **ADJUSTMENT**

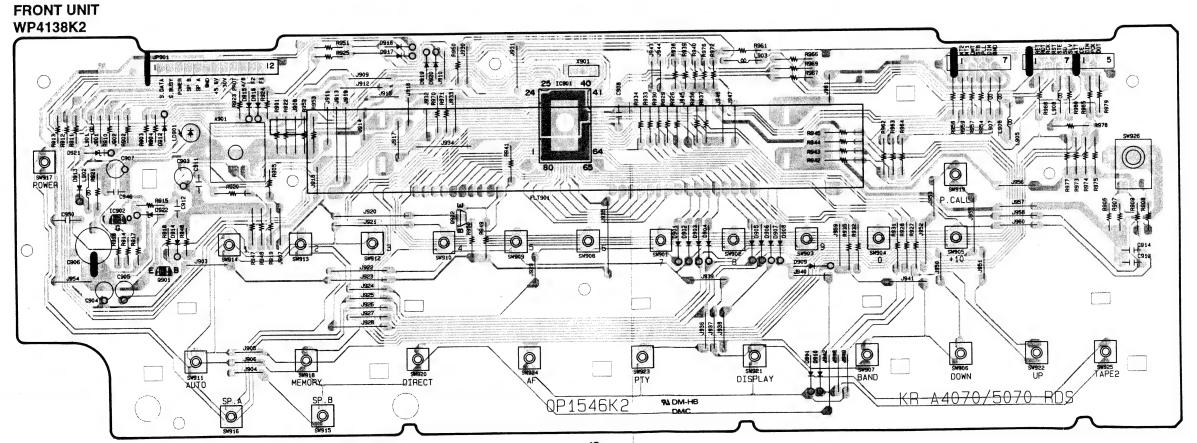
AM section: If alignment point is "-", confirm the value. If not, replacd the front end pack.

No.	ITEM	INPUT SETTINGS	rm the value. If not, re OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG
F	N SECTION	SELECTOR : F					
1	DISCRIMINATOR	(A) 98.0MHz 1kHz, ±40kHz dev. 60dBµ (ANT. input)	Connect a DC voltmeter between TP801 and TP802. (TUNER UNIT)	AUTO or MONO 98.0MHz	L805 (TUNER UNIT)	0V.	(a)
2	DISCRIMINATOR	(C) 98.0MHz 1kHz, ±40kHz dev. 60dBµ (ANT. input)	Connect a Distortion meter (1kHz)	AUTO or MONO 98.0MHz	L806 (TUNER UNIT)	Minimum distortion. (L or R)	
3	DISCRIMINATOR	(C) 98.0MHz 1kHz, ±40kHz dev. 60dBµ (ANT. input)	Connect a DC voltmeter between TP801 and TP802. (TUNER UNIT)	Or MONO 98.0MHz	L806 (TUNER UNIT)	ov.	(a)
4	DISTORTION (STEREO)	(C) 98.0MHz 1kHz, ±40kHz dev. Selector : L or R Pilot : ±6.0kHz dev. 60dBµ (ANT. input)	(B)	98.0MHz	IFT (Front end pack)	Minimum distortion. (L or R)	
5	SEPARATION	(C) 98.0MHz 1kHz, ±40kHz dev. Selector: L or R Pilot: ±6.0kHz dev. 60dBµ (ANT. input)	(B)	AUTO 98.0MHz	VR803 (TUNER UNIT)	Minimum cross talk.	
6	TUNING LEVEL	(A) 98.0MHz 0 dev. 17dBµ (ANT. input)	(B)	AUTO or MONO 98.0MHz	VR802 (TUNER UNIT)	Adjust VR802 and stop at the point where FLT901 (TUNED) goes on	
A	M SECTION	SELECTOR : A	M				
(1)	TUNING LEVEL	(D) 999MHz 26dBµ (ANT. input)	(B)	_	VR801 (TUNER UNIT)	Adjust VR801 and stop at the point where FLT901 (TUNED) goes on	
-	AUDIO SECTION						
<1>	IDLE CURRENT	_	Connect a DC voltmeter Across CP1 (L), CP2 (R) (MAIN UNIT)	Volume : 0	VR201 (L) VR202 (R) (AUDIO UNIT)	10mV	





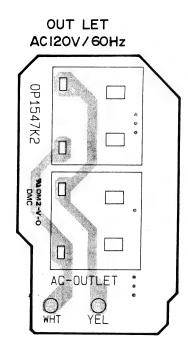


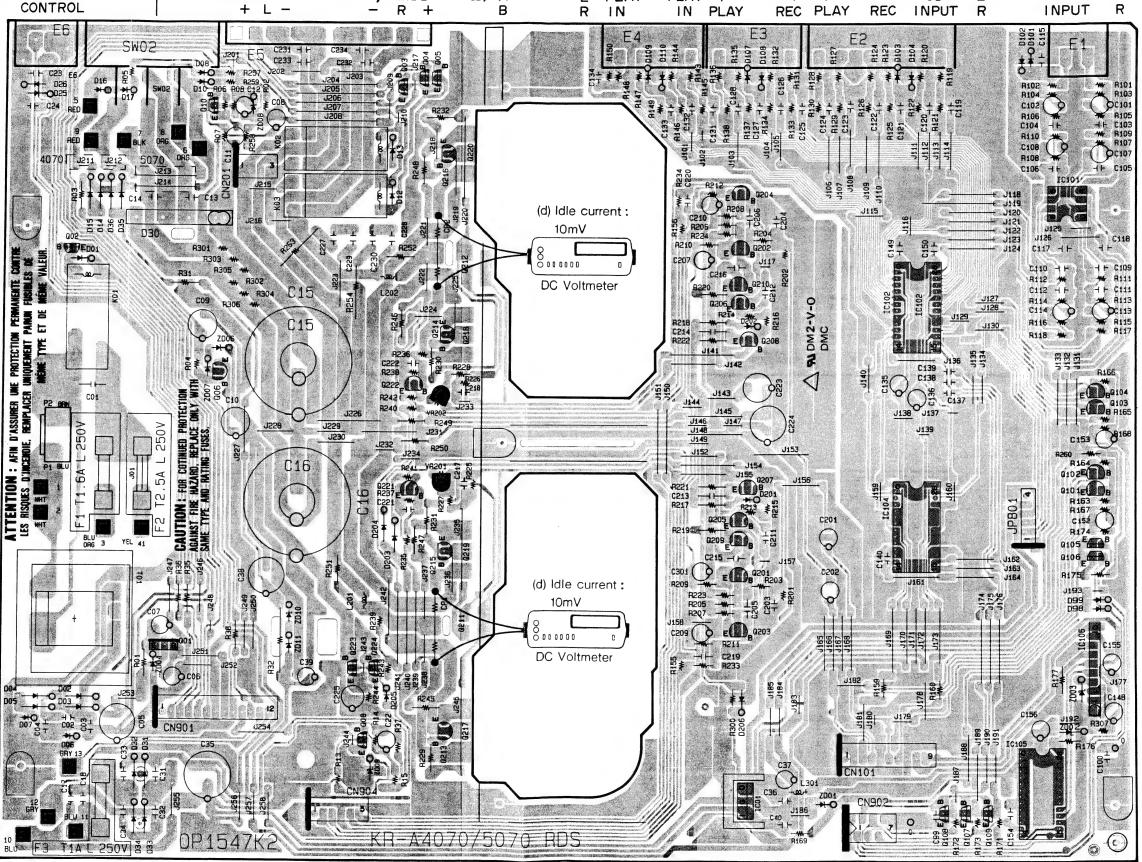


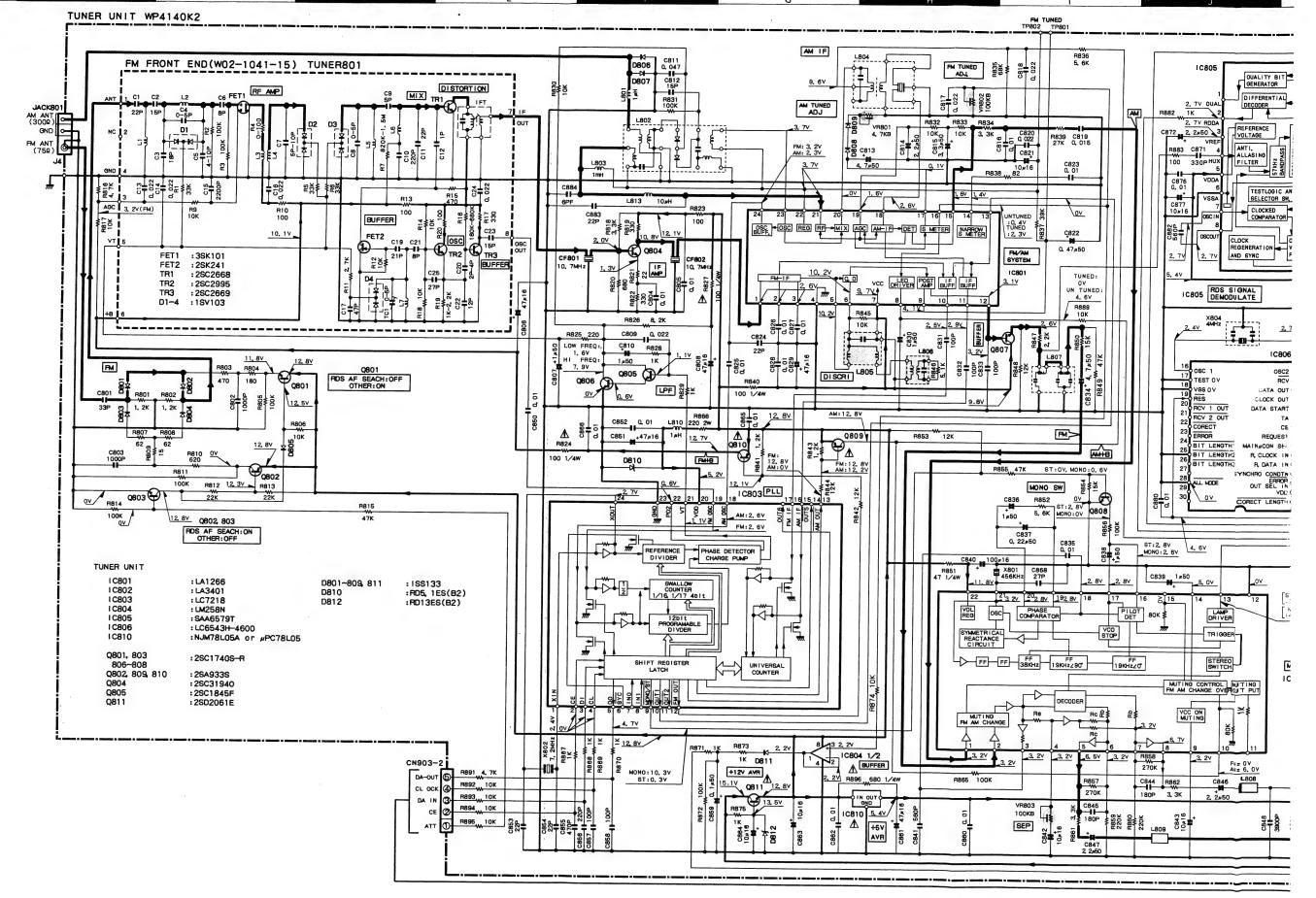
### PC BOARD (Component side view): KR-A4070/A5070

IMPEDANCE SELECTOR

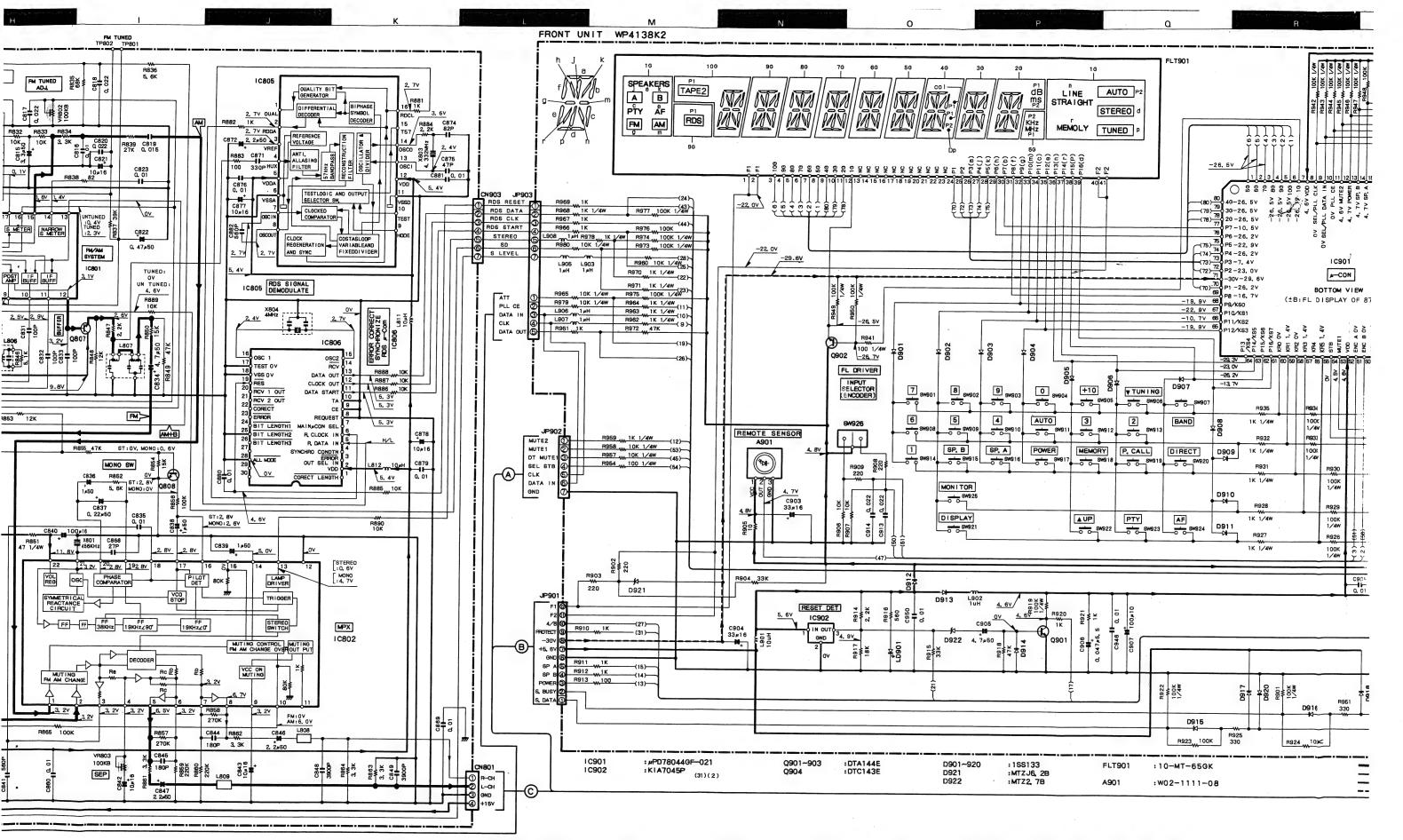
MAIN UNIT WP4143K3 (KR-A4070 E, G) WP4143K4 (KR-A4070 T) WP4137K4 (KR-A5070 E, G)







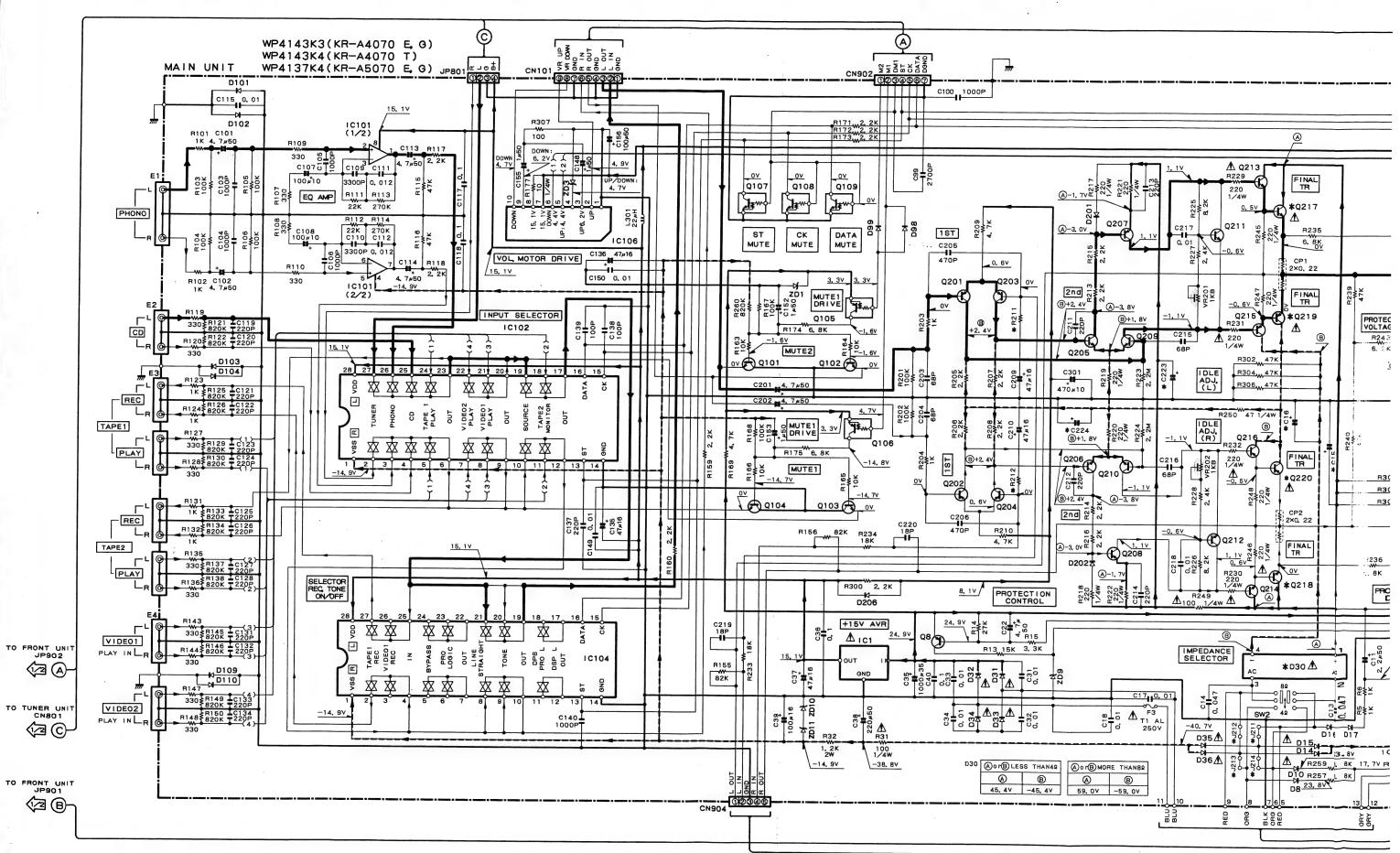
DC voltages are as measured with a high imped Values may vary slightly due to variatons between i ments or/and units.

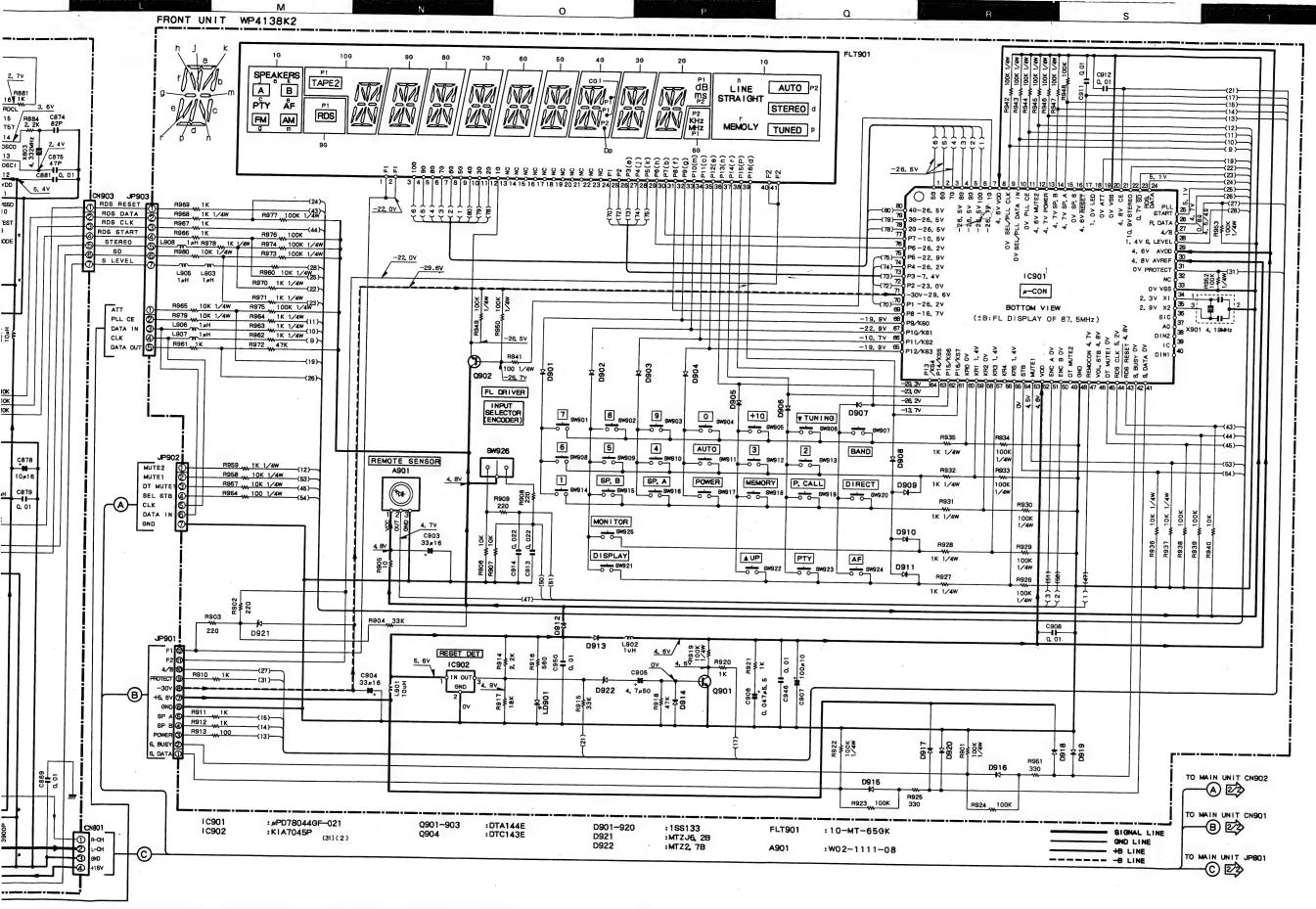


DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig. CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). A indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.





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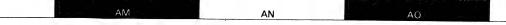
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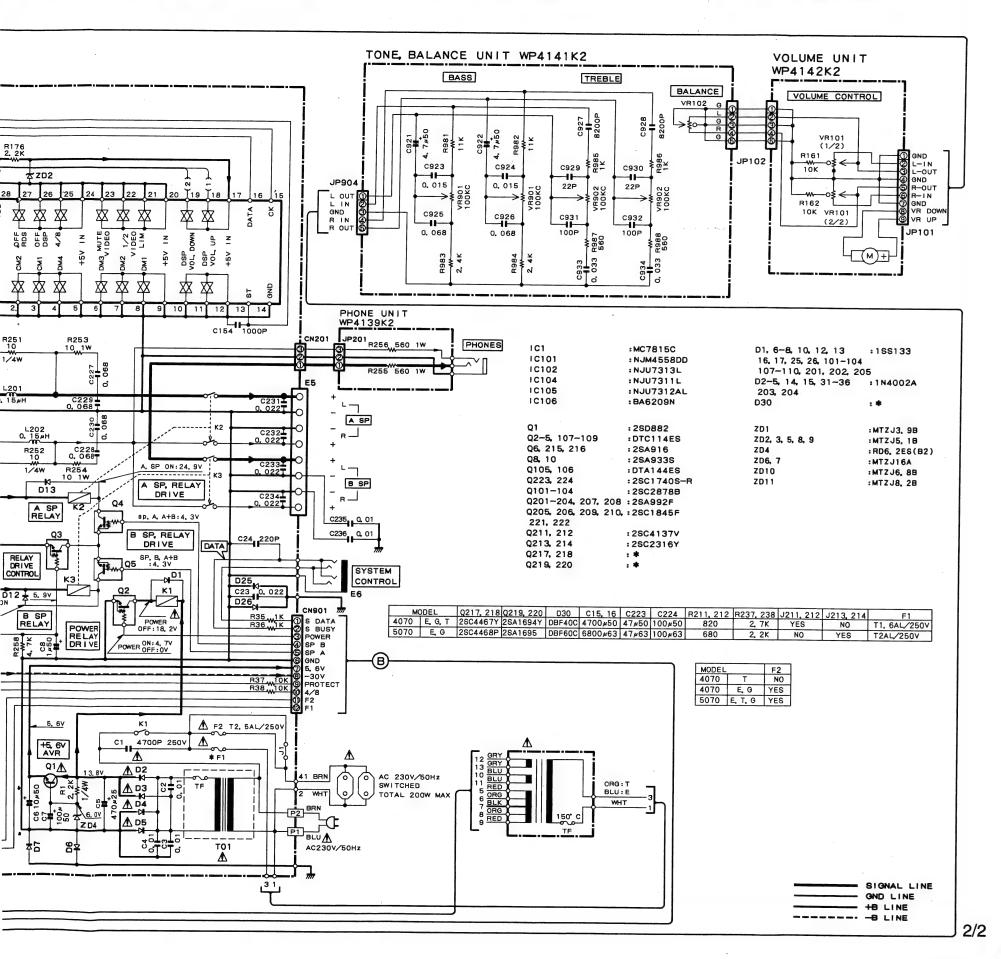
1/2

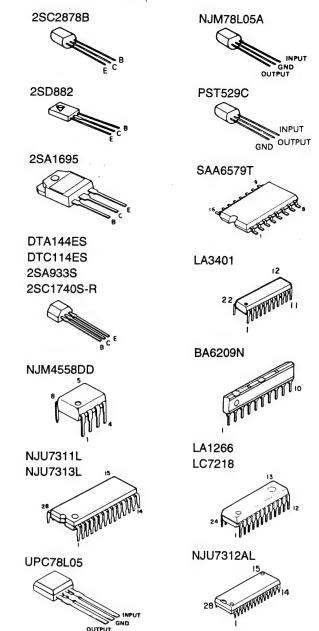
KR-A4070/A5070 [E, T, G]

Y05-3032-71

**KENWOOD** 







DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units

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KR-A4070/A5070 [E, T, G]

#### 651 630 Fx2 615 -609 617 616 602 626 650 **3**x2 SYSTEM CONTROL 601 652 SW02 Gx2 E5 Gx2 :N09-0333-05 :N09-3095-08 :N09-3160-08 CD TAPE 1 (MONITOR) VIDEO 1 VIDEO 2 E2 E3 E4 [3] E2 PLAY PLAY PLAY :N84-3008-46 Ex2 [ E1 E ≠3x6 :N89-3006-46 770 -F #3x8 BLK :N89-3008-45 QQ G G ø3x8 :N89-3008-46 JACK801 VR101 PHONE 636 606 612 627 VR102 TREBLE VR901 VR902 Ex4 P.CALL INPUT SELECTOR SW919 SW926 FLT901 625x4 SW917 ON STAND BY 634 SW914 SW913 SW912 SW910 SW909 SW908 SW901 SW902 SW903 SW904 SW905 639 0 623x4 AF PTY DISPLY BAND DOWN UP MONITORS SW924 SW923 SW921 SW907 SW906 SW922 SW925 633 Gx4 SW920 635x3 SW911 SW918 A SPEAKERS B SW916 SW915

Parts with exploded numbers larger than 700 are not suppled.

× New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnes dans le Parts No, ne sont pas fournis.

Telle ohne Parts No. werden nicht geliefert.

No 1

Ref.	No.	Addres 位 II	Parts	Parts No. 部品書号	Description 部品名/規格	Desti- Re- nation mark 仕 向 備者
				KF	R-A4070	
601 602 606 606 609		1A 1B 2A 2A 1B	*	A01-3167-08 A09-0170-08 A60-0764-08 A60-0765-08 A70-0985-08	METALIC CABINET BATTERY COVER FRONT PANEL FRONT PANEL REMOTE CONTROL ASSY	TEG
610 612 - -		2A 2A	*	B10-2137-08 B43-0287-04 B46-0122-23 B60-2114-08 B60-2115-08	FRONT GLASS KENMOOD BADGE WARRANTY CARD INSTRUCTION MANUAL (ENGLISH) INSTRUCTION MANUAL (F/D/I/S)	EG E TE E
-			*	B60-2116-08	INSTRUCTION MANUAL (GERMANY)	EG
615 615 616 617 617		1C 1C 1C 1C	*	E03-0085-05 E03-0324-08 E21-0031-08 E30-2721-05 E30-2799-08	AC OUTLET AC OUTLET GND TERMINAL AC POWER CORD ASSY AC POWER CORD ASSY	T EG E T
623		2C		G13-0513-08	CUSHION FOOT	
-			*	H10-7076-08 H25-0232-04 H25-0232-04 H25-1544-08 H50-1508-08	POLYSTYRENE FOAMED FIXTURE PROTECTION BAG (ACCESSORY) PROTECTION BAG (MANUAL) PROTECTION BAG (UNIT) ITEM CARTON CASE	Т
~			*	H50-1510-08	ITEM CARTON CASE	EG
625 626 627 630		2C 1A 2C 1C	*	J02-1099-08 J19-2815-04 J19-3631-08 J42-0200-08	FOOT LOOP ANTTENNA HOLDER PCB HOLDER AC CORD BUSHING	
632 633 634 635 636		2A 2A 2A 2A 2A 2A	* * *	K29-6180-08 K29-6181-08 K29-6182-08 K29-6183-08 K29-6184-08	KNOB PRESET(10KEY) KNOB VOLUME CONTROL KNOB INPUT SELECTOR KNOB BASS, TREBLE, BALANCE KNOB POWER	
637 638 639		2A 2A 2A	* *	K29-6186-08 K29-6187-08 K29-6189-08	KNOB P.CALL KNOB SPEAKERS KNOB FUNCTION	
641		1 B		L07-1801-08	POWER TRANSFORMER	
B				N09-3095-08 N09-3160-08	TAPTITE SCREW (M4X8) TAPTITE SAREW (M3X14)	
650 651 652		1B 1A 1A	*	T90-0176-05 T90-0804-08 T90-0805-08	T TYPE ANTENNA LOOP ANTTENA ANTTENNA ADAPTER	
601		1			R-A5070	, , , , , , , , , , , , , , , , , , , ,
602 606 609		1A 1B 2A 1B	*	A01-3167-08 A09-0170-08 A60-0763-08 A70-0985-08	METALIC CABINET BATTERY COVER FRONT PANEL REMOTE CONTROL UNIT	
610 612		2A 2A	*	B10-2137-08 B43-0287-04 B46-0122-23	FRONT GLASS KENWOOD BADGE WARRANTY CARD	

L: Scandinavia	
Y: PX (Far East, Hawaii)	
Y: AAFES (Europe)	

K: USA T: England E: Europe

P: Canada X: Australia M: Other Areas

R: Mexico G: Germany

⚠ indicates safety critical components.

× New Parts

Parts without Parts No. are not supplied.

	Ref. No. 参照番号	Address 位置	New Parts		rts No		部	Description 品名/規	格	Desti- nation 仕 向	Re- mari 備才
	-		* *	B60-21 B60-21 B60-21	15~0	8	INSTRUCTION	ON MANUAL (E ON MANUAL (E ON MANUAL (	(D/I/S)	E E EG	
	615 616 617	1C 1C 1C	*	E03-03 E21-00 E30-27	31-0	8	AC OUTLET GND TERMIN AC POWER C	IAL CORD			
	623	20	*	G13-05	13-0	8	CUSHION	FOOT			
	-		*	H10-70 H25-02 H25-02 H25-15 H50-15	32-0 32-0 44-0	4 4 8	PROTECTION PROTECTION	E FOAMED FI BAG (ACCES BAG (MANUA BAG (UNIT) ON CASE	SSORY)		
-	625 626 627 630	2C 1A 2C 1C		J02-10 J19-28 J19-36 J42-02	15-0 31-0	4 8	FOOT ANTTENNA H UNIT HOLDE AC CORD BU	R			
	632 633 634 635 636	2A 2A 2A 2A 2A 2A	* * * *	K29-61 K29-61 K29-61 K29-61 K29-61	81-0 82-0 83-0	8 8 3	KNOB PRESE KNOB VOLUM KNOB INPUT KNOB BASS, KNOB POWER	E CONTROL SELECTOR TREBLE, BALA	NCE		
	637 638 639	2A 2A 2A	* *	K29-61 K29-61 K29-61	87-0	В	KNOB P.CAL KNOB SPEAK KNOB FUNCT	ERS			
I	641	18		L07-09	99-0	8	POWER TRAN	SFORMER			
	B C			N09-30 N09-31				REW (M4X8) REW (M3X14)			
	650 651 652	1B 1A 1A	*	T90-01 T90-08 T90-08	04-0	3	T TYPE ANT LOOP ANTTE ANTTENNA A	NA			
I					EL	ECT	RIC PAR				
١	LD901			B30-04	13-09	ŏ	LED(LTL421	3(RED))			
	C01 C02 -04 C05 C06 C07			C91-14 CK45FF CE04KW CE04KW CE04KW	1H10: 1E47: 1H10:	32 Im Om	CERAMIC CERAMIC ELECTRO ELECTRO ELECTRO	4700PF 0.010UF 470UF 10UF 100UF	250WV Z 25WV 50WV 10WV		
	C08 C09 C10 C11 C12			CE04KW CE04KW CE04KW CE04KW CE04KW	1H101 1V101 1H2R2	LM LM 2M	ELECTRO ELECTRO ELECTRO ELECTRO ELECTRO	1.0UF 100UF 100UF 2.2UF 22UF	50WV 50WV 35WV 50WV 16WV		
	C13 ,14 C15 ,16 C15 ,16 C17 ,18 C22			CK45FF C90-356 C90-356 CK45FF CE04KW	61-05 65-06 1H103	5 3 3 Z	CERAMIC ELECTRO ELECTRO CERAMIC ELECTRO	0.047UF 4700UF 6800UF 0.010UF 4.7UF	2 50WV 63WV Z 50WV		5
	C23 C24 C31 -34 C35			CK45FF CC45FSI CK45FF CE04KWI	1H22	1J 3Z	CERAMIC CERAMIC CERAMIC ELECTRO	0.022UF 220PF 0.010UF 1000UF	Z J Z 35WV		

L: Scandinavia Y: AAFES (Europe)

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R: Mexico G: Germany 4: KR-A4070 5: KR-A5070

⚠ indicates safety critical components.

× New Parts

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Les articles non mentionnes dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht gellefert.

No.3

Ref. No.	Add	ress	New	F	art	s N	lo.			De	scription		Des	Re- mark:
参照番号	位		₩ ₩	部	品	1	号		部	品	名/規	格	仕	備考
36			*	C91-1	152	8-0	18		CERAMIC		0.1UF	Z		
37	1			CEO4					ELECTRO		47UF	16WV		ļ
38	i			CEO41					ELECTRO		220UF	50WV		ĺ
39				CE041					ELECTRO CERAMIC		100UF 0.1UF	16WV Z		
											2700PF	к		
099 0100			l	CK451					CERAMIC CERAMIC		1000PF	ĸ		1
101,102			!	CE04					ELECTRO		4.7UF	50WV	1	
103-106	1		ļ	CK45				- 1	CERAMIC		1000PF	K	1	1
2107,108				CE04	KWI	A 1	01M		ELECTRO		100UF	10WV		
0109,110				CQ93				- [	MYLAR MYLAR		3300PF 0.012UF	J J		
C111,112 C113,114	1			CEO4				- 1	ELECTRO		4.7UF	SOWV		1
C115			1	CK45	FF1	H1	03Z	- 1	CERAMIC		0.010UF	Z	1	1
C117,118	1		*	C91-	152	28 -	08		CERAMIC		0.1UF	Z		1
C119-128							221J	ĺ	CERAMIC		220PF	J J		
C131-134 C135,136				CC45					CERAMIC ELECTRO		220PF 47UF	16WV	1	1
C133,136	1						221J	ì	CERAMIC		220PF	j		İ
C138,139							101J		CERAMIC		100PF	J		
C140	1			CK45	FB:	l H 1	02K	- [	CERAMIC		1000PF	K		Ĺ
C148			ı	CE04				Į	ELECTRO		1.0UF	50WV		1
C149,150 C152,153			1	CK45				1	CERAMIC ELECTRO		0.010UF	7 Z 50WV		1
C154				CK45					CERAMIC		1000PF	K		
C155				CE04	KW	1 H C	10M		ELECTRO		1.0UF	50WV		
C156	1			CE04				ı	ELECTRO		100UF	16WV		
C201,202				CE04				ļ	ELECTRO		4.7UF	50WV		1
C203,204 C205,206				CK 45			1680J 171K		CERAMIC CERAMIC		68PF 470PF	J K		
C207			1	CEO	ıku	1 .	71M		ELECTRO		470UF	10WV		
C207,210	1		1	CEO					ELECTRO		100UF	10WV		
C211-214			1	CC45	FS	L1H	1221J		CERAMIC		220PF	J		1
C215,216			ļ				1680J		CERAMIC		68PF	J		1
C217,218				CK4	off	1 H	103Z		CERAMIC		0.0100	Z		
C219,220							1180J		CERAMIC		18PF	ī		
C221,222 C223							H221J ≸70M		CERAMIC ELECTRO		220PF 47UF	J 50WV	1	1.
C223							470M		ELECTRO		47UF	63WV		
C224							101M		ELECTRO		100UF	50WV		1
C224							101M		ELECTRO		100UF	63WV	1	
C225			-				221M		ELECTRO		220UF	6.3WV		1
C227-230 C231-234							H6833 223Z		MYLAR		0.068U 0.022U			
C235,236			1				103Z		CERAMIC		0.0100			
C301				CEO	4KW	1 A	471M		ELECTRO		470UF	10WV		
C801				CC4	5FC	H1	H330.	ſ	CERAMIC		33PF	J		
C802,803							102K		CERAMIC		1000PF 0.010U	K F Z	-	
C804,805 C806							103Z 470M		ELECTRO		47UF	16WV		
C807			1	CEO	4K V	/1 H	010M		ELECTRO		1.0UF	50WV	-	
C808							470M		ELECTRO		47UF	16WV		
	- 1			I C99	3FN	1G1	H223	J	MYLAR		0.0220	FJ	- 1	
C809 C810	- 1		- 1				010M		ELECTRO		1.0UF	50WV		

L: Scandinavia Y: PX (Far East, Hawaii) T: England Y: AAFES (Europe)

K: USA X: Australia

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4: KR-A4070 5: KR-A5070

indicates safety critical components.

\* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnes dans le l'arts No, ne sont pas rournis.

No.4 Telle ohne Parts No. werden nicht geliefert. Desti- Re-Parts No. Description Address New nation marks 仕 向備考 部品名/規格 位置 \* 部品番号 CERAMIC 15PF C812 CC45FCH1H150J 50WV 4.7UF CEO4KW1H4R7M **ELECTRO** C813 2.2UF 50WV CEO4KW1H2R2M ELECTRO C814 3.3UF 50WV C815 CEO4KW1H3R3M ELECTRO 0.010UF Z CK45FF1H103Z CERAMIC C816 0.022UF 0.015UF C817,818 CK45FF1H223Z CERAMIC Ţ C819 CQ93FMG1H153J MYLAR C820 CK45FF1H223Z CERAMIC 0.022UF **ELECTRO** 10UF 16WV C821 CEOAKW1C100M 0.47UF **ELECTRO** 50WV CEO4KW1HR47M C822 CK45FF1H103Z 0.010UF C823 CERAMIC 22PF C824 CC45FCH1H22OJ CERAMIC 0.010UF C825-828 CK45FF1H103Z CERAMIC 16WV C829 CEO4KW1C470M **ELECTRO** A7HF CE04KW1H010M ELECTRO 1.OUF 50WV C830 C831-833 CC45FSL1H101J CERAMIC 100PF CEO4KW1H4R7M ELECTRO 4.7UF 50WV C834 MYLAR 0.010UF C835 CQ93FMG1H103J ELECTRO 1.OUF 50WV C836 CE04KW1H010M 0.22UF C837 CEO4KW1HR22M **ELECTRO** 50WV SOUV C838.839 CE04KW1H010M **ELECTRO** 1.0UF 100UF C840 CEO4KW1C101M ELECTRO 16WV CK45FB1H561J CERAMIC 560PF C841 C842,843 ELECTRO. 10UF 16WV CEDAKWICI DOM 180PF J C844,845 CC45FSL1H181J CERAMIC **ELECTRO** 2.2UF 50WV C846,847 CEO4KW1H2R2M C848,849 CQ93FMG1H392J MYLAR 3900PF CK45FF1H103Z CERAMIC 0.010UF C850 47UF 16WV **ELECTRO** C851 CEO4KW1C470M 0.010UF C852 CK45FF1H103Z CERAMIC CC45FCH1H220J CERAMIC 22PF C853,854 470PF C855 CC45FB1H471K CERAMIC CC45FSL1H221J CERAMIC 220PF C856 C857,858 CC45FSL1H101J CERAMIC 100PF 50WV ELECTRO 0.1UF CE04KW1H0R1M C859 CERAMIC 0.010UF C860 CK45FF1H103Z CEO4KW1C470M **ELECTRO** 47UF 16WV C861 CERAMIC 0.010UF C862 CK45FF1H103Z 10UF ELECTRO 16WV C863,864 CE04KW1C100M 0.010UF Z CERAMIC C865,866 CK45FF1H103Z 27PF CERAMIC C868 CC45FSL1H270J 0.010UF C869 CK45FF1H103Z CERAMIC 7. CERAMIC 330PF C871 CC45FSL1H331J CE04KW1H2R2M 2.2UF 50WV **ELECTRO** C872 CERAMIC 0.010UF CK45F1H103M C873 82PF CC45FSL1H820J CERAMIC C874 CC45FSL1H470J CERAMIC 47PF C875 CK45FF1H103Z CERAMIC 0.010UF C876 C877,878 **ELECTRO** 10UF 16WV CE04KW1C100M 0.010UF Z CK45FF1H103Z CERAMIC C879-881 560PF 22PF C882 CK45FB1H561J CERAMIC CERAMIC C883 CC45FCH1H220J CC45FCH1H060D CERAMIC 6.OPF C884 33UF 16WV C903,904 CEO4KW1C330M ELECTR®

L: Scandinavia Y: PX (Far East, Hawaii) Y: AAFES (Europe)

C905

K: USA

P: Canada T: England E: Europe X: Australia M: Other Areas

CEO4KW1H4R7M

R: Mexico G: Germany

4.7UF

ELECTRO

♠ indicates safety critical components.

50WV

KR-A4070/A5070 [E, T, G]

Parts without Parts No. are not supplied.

Les articles non mentionnes dans le Parts No. ne sont pas fournis.

Telle ohne Parts No. werden nicht gellefert

No E

R	ef. No.	Addr	ess	New Parts	Parts No.	Description	Desti-	Re-
3	<b>於照番号</b>	位		₩ (S	部品番号	部品名/規格	nation	mark 備考
C9	06 07 08 11,912 13,914				C90-1827-05 CE04KW1A101M CK45FF1H103Z CK45FF1H103Z CK45FF1H223Z	ELECTRO 0.047F 5.5WV ELECTRO 100UF 10WV CERAMIC 0.010UF Z CERAMIC 0.010UF Z CERAMIC 0.022UF Z		
C9 C9	21,922 23,924 25,926 27,928 29,930				CE04KW1H4R7M CQ93FMG1H153J CQ93FMG1H683J CK45FB1H822Z CC45FCH1H22OJ	ELECTRØ 4.7UF 50WV MYLAR 0.015UF J MYLAR 0.068UF J CERAMIC 8200PF Z CERAMIC 22PF J		
					CC45FSL1H101J CQ93FMG1H333J CK45FF1H103Z CK45FF1H103Z	CERAMIC		
E1 E2 E3 E5 E6	, 4	1C 1C 1C 1C 1B			E63-0157-08 E63-0159-08 E63-0158-08 E70-0004-08 E11-0188-05	PHONO JACK PHONO PHONO JACK CD, TAPE1 PHONO JACK TAPE2, VIDEO1, 2 LOCK TERMINAL BOARD SPEAKERS MINIATUA PHONE JACK SYNCHRO		
	CK801 One	1C 2A			E70-0023-08 E11-0263-08	TERMINAL BOARD ANTENNA PHONE JACK HEAD PHONES		
F1 F1 F2 F3		18 18 18 18			F05-1623-05 F06-2021-05 F05-2525-05 F06-1022-05	FUSE SEMCO T1.6A/250V FUSE SEMCO T2A/250V FUSE SEMCO T2.5A/250V FUSE SEMCO T1A/250V	G	<b>4</b> 5
-					J13-0084-08	FUSE CLIP		
	01				L72-0575-08 L39-1303-08 L33-0379-08 L40-1091-17 L39-1322-08	CERAMIC FILTER 10.7MHz INDUCTOR 0.15UH INDUCTOR 22UH SMALL FIXED INDUCTOR 1UH COIL		
L8: L8: L8: L8:	04 05 06				L33-0381-08 L30-0904-08 L30-0905-08 L30-0906-08 L39-1323-08	SMALL FIXED INDUCTOR 1mH IFT AM IFT FM IFT FM COIL		
L81 L8 L90	11-813				L35-0070-08 L40-1091-17 L40-1001-17 L40-1001-17 L40-1091-17	COIL SMALL FIXED INDUCTOR 1UH SMALL FIXED INDUCTOR 10UH SMALL FIXED INDUCTER 10UH SMALL FIXED INDUCTOR 1UH		
L90 T0: X80 X80 X80	01			*	L40-1091-17 L07-1987-08 L78-0616-08 L77-2126-08 L77-2127-08	SMALL FIXED INDUCTOR 1UH TRANSFORMER RESONATOR 456kHz CRYSTAL 7.200MHz CRYSTAL 4.332MHz	т	4
X80 X90					L78-0617-08 L78-0209-05	RESONATOR 4.00MHz RESONATOR 4.19MHz		
G		2K			N89-3010-46	BINDING HEAD TAPTITE SCREW		
CP1 R03 R31	3				R90-0947-08 RD14GB2E101J RD14GB2E101J	MULTI-COMP 0.22X2 K 3W FL-PROOF RD 100 J 1/4W FL-PROOF RD 100 J 1/4W		

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L: Scandinavia	
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	Ref. No.	Address	New Parts	Parts No.	Description	Desti-	Re-
	参照番号	位置	新	部品養号	部品名/規格		marks 備考
Æ	R32 R177 R217-222 R229-232 R245-248			RS14KB3D122J RD14GB2E100J RD14GB2E221J RD14GB2E221J RD14GB2E221J	FL-PROOF RS 1.2K J 2W FL-PROOF RD 10 J 1/4W FL-PROOF RD 220 J 1/4W FL-PROOF RD 220 J 1/4W FL-PROOF RD 220 J 1/4W		
Δ	R249 R250 R253,254 R255,256 R824			RD14GB2E101J RD14GB2E470J RS14KB3A100J RS14KB3A561J RD14GB2E101J	FL-PROOF RD 100 J 1/4W FL-PROOF RD 47 J 1/4W FL-PROOF RS 10 J 1W FL-PROOF RS 560 J 1W FL-PROOF RD 100 J 1/4W		
	R827 R840 R851 R866 VR101	2B		RD14GB2E101J RD14GB2E101J RD14GB2E470J RS14KB3D221J R39-0001-08	FL-PROOF RD 100 J 1/4W FL-PROOF RD 100 J 1/4W FL-PROOF RD 47 J 1/4W FL-PROOF RS 220 J 2W POTENTIOMETER 100KBX2 VOLUME		
	VR102 VR201,202 VR801 VR802 VR803	28	*	R31-0053-08 R12-1066-05 R12-1053-05 R32-0012-08 R32-0012-08	POTENTIOMETER BALANCE TRIM POT. 1KB IDLE ADJ TRIM POT. 4.7KB AM TUNE LEVEL TRIM POT. 100KB FM TUNE LEVEL TRIM POT. 100KB SEPARATION		5
	VR901,902	2B		R31-0058-08	POTENTIOMETER BASS TREBLE		
	K1 K2 ,3 SW2 SW901-925 SW926	1C 2B 2B		\$76-0034-08 \$76-0035-08 \$62-0032-08 \$70-0030-08 \$60-0030-08	MAGNETIC RELAY MAGNETIC RELAY SLIDE SWITCH IMPEDANCE SELECT TACT SWITCH KEY BOARD ROTARY SWITCH INPUT SELECTOR		
Δ	D1 D2 -5 D06 -08 D10 D12 ,13			1SS133 1N4002A 1SS133 1SS133 1SS133	DIODE DIODE DIODE DIODE DIODE		
<b>△</b>	D14 ,15 D16 ,17 D25 ,26 D30 D30			1N4002A 1SS133 1SS133 DBF40C DBF60C	DIODE DIODE DIODE DIODE DIODE		4 5
Δ	D31 -36 D98 ,99 D101-104 D107-110 D201,202			1N4002A 1SS133 1SS133 1SS133 1SS133	DIODE DIODE DIODE DIODE DIODE		
	D203,204 D205,206 D801-809 D810 D811			1N4002A 1SS133 1SS133 RD5.1ES(B2) 1SS133	DIODE DIODE DIODE ZENER DIODE DIODE		
	D812 D901-920 D921 D922 FLT901	2В	*	RD13ES(B2) 1SS133 MTZJ6.2B MTZ2.7B 10-MT-65GK	ZENER DIODE DIODE ZENER DIODE ZENER DIODE FLUORESCENT INDICATOR TUBE		
1	IC01 IC101 IC102			MC7815C NJM4558DD NJU7313L	IC(VOLTAGE REGULATOR/+15) IC(OP AMP X2) IC(ANALOG SWITCH) SELECTOR SW)		

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4: KR-A4070 5: KR-A5070

indicates safety critical components.

× New Parts

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Teile ohne Parts No. werden nicht geliefent.

No.7

	Ref. No.	Address 位 置	New Parts	Parts No. 部品者号	Description 部品名/規格	nation	Re- marks 備考
	IC104 IC105 IC106 IC801 IC802		* *	NJU7311L NJU7312AL BA6209N LA1266 LA3401	IC(ANALOG SWITCH)ARRAY) IC(SWITCHING IC)TCH X16) IC(MOTOR DRIVER) IC(AN/FM IF) IC(FM MPX)	"	
	IC803 IC804 IC805 IC806 IC810			LC7218 LM258N SAA6579T LC6543H-4600 NJM78L05A	IC(PLL FREQUENCY SYNTHESIZER) IC IC(RDS DEMODULATOR) IC(4bit MICROPROCESSOR) IC(VOLTAGE REGULATOR/ +5V)		
Δ	IC810 IC901 IC902 Q01 Q02 -05			UPC78L05 UPD78044GF-021 PST529C 2SD882 DTC114ES	IC(VOLTAGE REGULATOR/ +5V) IC(8BIT MICROPROCESSOR) IC(SYSTEM RESET) TRANSISTOR DIGITAL TRANSISTOR	Manual consists of the	
Δ	906 908 910 9101-104 9105,106			2SA916 2SA933S 2SA933S 2SC2878B DTA144ES	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR		
	9107-109 9201-204 9205,206 9207,208 9209,210			DTC114ES 2SA992F 2SC1845F 2SA992F 2SC1845F	DIGITAL TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
<u>A</u>	9211,212 9213,214 9215,216 9217,218 9217,218		*	2SC4137V 2SC2316Y 2SA916 2SC4467Y 2SC4468P	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		4 5
<u>A</u>	Q219,220 Q219,220 Q221,222 Q223,224 Q801		*	2SA1694Y 2SA1695 2SC1845F 2SC1740S-R 2SC1740S-R	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		5
	9802 9803 9804 9805 9806-808			2SA933S 2SC1740S-R 2SC31940 2SC1845F 2SC1740S-R	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	1	•
	Q809,810 Q811 Q901,902 ZD01 ZD02,03			2SA933S 2SD2061E 2SC1740S-R MTZJ3.9B MTZJ5.1B	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR ZENER DIODE ZENER DIODE		
	ZD04 ZD06,07 ZD08,09 ZD10 ZD11			RD6.2ES(B2) MTZJ16A MTZJ5.1B MTZJ6.8B MTZJ6.2B	ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE		
-	A901 TUNER801			W02-1111-08 W02-1041-15	ELECTRIC CIRCUIT MODULE FM FRONT END		

L: Scandinavia 

K: USA

P: Canada

R: Mexico G: Germany

4: KR-A4070 5: KR-A5070 ♠ indicates safety critical components.

KR-A4070/A5070 [E, T, G]

### **SPECIFICATIONS**

KR-A5070	KR-A4070
Audio section	Audio section
Rated power output	Rated power output
(DIN) 1,000 Hz at 8 Ω 100 W + 100 W	(DIN) 1,000 Hz at 8 Ω 60 W + 60 W
at 4 Ω 90 W + 90 W	at 4 Ω 55 W + 55 W
Total harmonic distortion (1 kHz, 8 Ω) 0.01% at 50 W	Total harmonic distortion (1 kHz, 8 Ω) 0.01% at 30 W
Signal to noise ratio	Signal to noise ratio
PHONO (MM) 56 dB (DIN, 50 mW output)	PHONO (MM) 56 dB (DIN, 50 mW output
CD, TAPE, VIDEO 57 dB (DIN, 50 mW output)	CD, TAPE, VIDEO 57 dB (DIN, 50 mW output
Input sensitivity / impedance	Input sensitivity / impedance
PHONO (MM)	PHONO (MM) 2.5 mV / 47 ks
CD, TAPE, VIDEO 200 mV / 47kΩ	CD, TAPE, VIDEO 200 mV / 47ks
Tone controls	Tone controls
BASS ±10 dB (at 100 Hz)	BASS ±10 dB (at 100 Hz
TREBLE ±10 dB (at 10 kHz)	TREBLE ±10 dB (at 10 kHz
FM Tuner section	FM Tuner section
Tuning frequency range 87.5 MHz~108 MHz	Tuning frequency range 87.5 MHz~108 MHz
Ilsable sensitivity (DIN at 75 Ω)	Usable sensitivity (DIN at 75 $\Omega$ )
MONO 1.1 μV	MONO 1.1 μ\
STEREO45 μV	STEREO 45 µ\
Total harmonic distortion at 1 kHz (DIN)	Total harmonic distortion at 1 kHz (DIN)
MONO 0.15%	MONO 0.159
STEREO	STEREO
	Signal to noise ratio (DIN weighted at 1 kHz)
Signal to noise ratio (DIN weighted at 1 kHz)	MONO
MONO 68 dB (65.2 dBf input)	
STEREO 61 db (65.2 dBf input)	STEREO 61 dB (65.2 dBf input
Selectivity (DIN ± 300 kHz) 53 dB	Selectivity (DIN ± 300 kHz) 53 dl
Stereo separation (DIN)	Stereo separation (DIN)
1 kHz 40 dB	1 kHz 40 dE
6.3 kHz 33 dB	6.3 kHz 33 dE
Frequency response 30 Hz~15 kHz, + 0.5 dB,- 2.0 dB	Frequency response 30 Hz~15 kHz, + 0.5 dB,- 2.0 df
AM Tuner section	AM Tuner section
Tuning frequency range 531 kHz ~ 1,602 kHz	Tuning frequency range 531 kHz ~ 1,602 kHz
Usable sensitivity 12 µV / (400 µV / m)	Usable sensitivity 12 μV / (400 μV / m
Total harmonic distortion 0.3 %	Total harmonic distortion 0.3 9
Signal to noise ratio	Signal to noise ratio
(at 30% mod. 1mV input) 50 dB	(at 30% mod. 1mV input) 50 di
Selectivity	Selectivity
General	General
Power consumption 190 W	Power consumption 120 V
AC outlet	AC outlet
SWITCHED 2: (total 200 W max)	SWITCHED 2: (total 200 W max
Dimensions W:440 mm	Dimensions W:440 mn
H:133 mm	H:133 mm
D:350 mm	D:350 mm
Weight (net) 8.3 kg	Weight (net) 6.7 kg

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

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Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.